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Briefs

The Latest On Methylation
Excerpts of recent studies on worthy-of-note topics
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Homocysteine associated with hostility and anger

In the journal *Life Sciences*, Stoney & Engebretson show that high levels of homocysteine are associated with greater hostility in men and women. In men, high levels of homocysteine are also associated with a greater degree of bottled-up anger. Hostility and anger are risk factors for cardiovascular disease, as is homocysteine. Thus methylation and a reduction in homocysteine levels may have the additional benefit of lowering hostility and anger.

Stoney & Engebretson (2000). Plasma homocysteine concentrations are positively associated with hostility and anger. *Life Sciences* 66, p2267-2275.

Folic acid supplements for depression

A November 2000 study shows that folic acid supplements are a simple way to greatly improve the antidepressant action of fluoxetine and probably other antidepressants. (Fluoxetine is the active ingredient in Prozac). In addition to improving the effectiveness of fluoxetine, folic acid supplements also greatly reduced the side effects of fluoxetine. This study concludes that folic acid levels used should be sufficient to decrease plasma homocysteine, and that men require a higher dose of folic acid to achieve this than do women.

Coppen & Bailey (2000). Enhancement of the antidepressant action of fluoxetine by folic acid: a randomized, placebo controlled trial. *Journal of Affective Disorders* 60, p121-130.

Selenium supplements to prevent cancer

Studies published in 2000 show that selenium is essential to maintain DNA methylation. Selenium, the form of L-selenomethionine, was most helpful in this regard. The same group also showed that selenium from high selenium broccoli protects rats from colon cancer.

Earlier studies show that selenium supplements significantly reduce total cancer deaths and total cancer incidence in humans. In particular, supplemental selenium reduced the incidences of lung, colorectal and prostate cancers. Selenium-enriched yeast (200 micrograms selenium/day) was used in these studies.

These studies underscore the need to get 200 micrograms of selenium per day.

The best readily available forms are L-selenomethionine and/or selenium-enriched yeast. Broccoli is an excellent food, but you shouldn't rely on it for all your selenium unless the broccoli is specifically selenium enriched. This is also true of garlic and other foods that are sometimes (but not always) rich in selenium.

Clark et al. (1996) Effects of selenium supplementation for cancer prevention in patients with carcinoma of the skin. A randomized controlled trial. Nutritional Prevention of Cancer Study Group. *Journal of the American Medical Association* 276, p1957-1963.

Davis et al. (2000) Dietary selenium and arsenic affect DNA methylation In vitro in caco-2 cells and In vivo in rat liver and colon. *Journal of Nutrition* 130, p2903-2909.

Finley et al. (2000) Selenium from high selenium broccoli protects rats from colon cancer. *Journal of Nutrition* 130, p2384-2389.

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